UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7
25 FUNSTON ROAD
KANSAS CITY, KANSAS 66115

RECEIVED
SEP 09 1991
REML SECTION

Date: _____

MEMORANDUM

SUBJECT: Data Transmittal for Activity #: CS56R,
Site Desciption: Missouri Electric Works

FROM: Andrea Jirka
Chief, Laboratory Branch, ENSV

TO: Robert Morby
Chief, Superfund Branch, WSTM

ATTN: P. France-Isetts

Attached is the data transmittal for the above referenced site. This should be considered a ____ Partial or X Complete data transmittal (completes transmittal of _____). If you have have any questions or comments, please contact Dee Simmons at 551-5129.

Attachments

cc: Data Files

MEW Site File
Break6_000744

MEW
MOD980965982
6.3 EPA

NOTE: Please see Mary Gerken, SPFD-WSTM, if you want an electronic copy of the data. #158426

S00153993
SUPERFUND RECORDS

RECYCLE

DRAFT FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY — REGION VII

ENVIRONMENTAL SERVICES DIV 25 FUNSTON RD, KANSAS CITY, KS 66115

FY: 91 ACTNO: [illegible] SAMNO: 001 QCC: _ MEDIA: SOIL [illegible]

ACTIVITY DES: MO ELECTRIC WORKS [illegible] LATITUDE: ___ ___ ___

LOCATION: CAPE GIRARDEAU MO PROJECT NUM: A33 -- LONGITUDE: ___ ___ ___

SAMPLE DES: ______________ DATE TIME [illegible]

LOCATION: CAPE GIRARDEAU MO BEG: 05 17 MM [illegible] 07 30 EAST ____

CASE/BATCH/SMO: ____/ /____ LAB: ____ END: __/ / __ __ NORTH ____

STORET/SAROAD NO: ______ DOWN ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	AGE	NAME	
~~GLASS~~	~~NONE~~	~~[illegible]~~	~~VOLATILES~~	MM
~~GLASS~~	~~ICED~~	~~[illegible]~~	~~SEMIVOLATILES~~	MM
GLASS	ICED	[illegible]	PCBS — [illegible]	[illegible]

COMMENTS:

SAMPLE LOCATION # 1

DEPTH 0-6" BELOW CONCRETE

SAMPLE COLLECTED BY: Mary McClain

MEW Site File
Break6_000745

DATE: FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII

ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KANSAS 66115

FY: 91 ACTNO: CS5AR SAMNO: 00[illegible] QC: _ [illegible]

ACTIVITY DESC: MO. ELECTRIC WORKS REF LATITUDE: __ __ __

LOCATION: CAPE GIRARDEAU MO PROJECT NUM: A43 PT. LONGITUDE: __ __ __

SAMPLE DES: ______ DATE TIME FROM REF PT

LOCATION: CAPE GIRARDEAU MO BEG: 05/17/91 08:00 RANGE: ____

CASE/BATCH-SAS: ___/___/___ LAB: ___ END: __/__/__ __:__ NORTH: ____

STORET/SAROAD NO: ______ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MCP	NAME
~~GLASS~~	~~NONE~~	~~VV~~	~~VOLATILES~~ MM
~~GLASS~~	~~ICED~~	~~SV~~	~~SEMIVOLATILES~~ MM
GLASS	ICED	SIA	PCB'S - G. BEEMONT

COMMENTS:

SAMPLE LOCATION #2

DEPTH 0-6" BELOW CONCRETE

SAMPLE COLLECTED BY: Mary K. McClain

MEW Site File
Break6_000746

SAMPLE LOCATION #3
DEPTH 0-6" BELOW CONCRETE

Mary K. McClain

DRAFT FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII

ENVIRONMENTAL SERVICES DIV., 25 FUNSTON RD, KANSAS CITY, KS 66115

FY: 91 ACTNO: ESSAR SAMNO: 004 QCC: _ CATIA: SOIL PL: [illegible]

ACTIVITY DES: 00 ELECTRIC WORKS RAL LATITUDE ___ ___ ___

LOCATION: CAPE GIRARDEAU MO PROJECT NUM: A3A FI LONGITUDE ___ ___ ___

SAMPLE DES: ______ DATE TIME SMPLR [illegible]

LOCATION: CAPE GIRARDEAU MO BEG: 06/~~[illegible]~~ 17 MM/91 0900 EAST ___

CASE/MAT/SAS ___/_/___ LAB: ___ END: __/__/__ __ NORTH ___

STORET/SAROAD #: ______ ZONE: ___

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	ANL	NAME
~~GLASS~~	~~NONE~~	~~[illegible]~~	~~[illegible]~~ MM
~~GLASS~~	~~ICED~~	~~[illegible]~~	~~[illegible]~~ MM
GLASS	ICED	.S1A	'F1R S - G. [illegible]

COMMENTS:

SAMPLE LOCATION #4

DEPTH ~~0-6"~~ MM 6-18" BELOW CONCRETE

SAMPLE COLLECTED BY: Mary McClain

DRAFT FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII

ENVIRONMENTAL SERVICES DIV 25 FUNSTON RD KANSAS CITY, KS [illegible]

FY: 91 ACTNO: ESSAR SAMNO: 005 QCC: _ MEDIA: SOIL PR: S P F B

ACTIVITY DES: MO. ELECTRIC WORKS REF LATITUDE: __ __ __

LOCATION: CAPE GIRARDEAU MO PROJECT NUM: A33 PT. LONGITUDE: __ __ __

SAMPLE DES: ____________ DATE TIME FROM REF PT

LOCATION: CAPE GIRARDEAU MO BEG: 04/[illegible]/91 17 MM 09 30 EAST: ____

CASE/BATCH/SAS: ____/____ LAB: ____ END: __/__/__ NORTH: ____

STORET/SAROAD NO: ____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	AGP	NAME
~~GLASS~~	~~NONE~~	~~[illegible]~~	~~[illegible]~~ MM
~~GLASS~~	~~ICED~~	~~55~~	~~[illegible]~~ MM
GLASS	ICED	516	PCB'S - L. REFMON:

COMMENTS

SAMPLE LOCATION # 5
DEPTH 0-6" BELOW CONCRETE

SAMPLE COLLECTED BY: Mary McClain

MEW Site File
Break6_000749

DATE: FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 7
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 91 ACTNO: LNSAR SAMNO: 00A QCC: _ MEDIA: SOIL ML: S P R B

ACTIVITY DES: MO ELECTRIC WORKS REF LATITUDE: ___ ___ ___
LOCATION: CAPE GIRARDEAU CO PROJECT NUM: 034 RF: LONGI: ___ ___ ___

SAMPLE DES: ______________________ DATE TIME FROM REF PT
LOCATION: CAPE GIRARDEAU MO BEG: 04/~~14~~ 17 MM/91 08 30 EAST: ___
CASE/BATCH/SAS: ______/__/______ LAB: ___ END: __/__/__ __ __ NORTH: ___
STORET/SAROAD NO: ________ DOWN: ___

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
~~GLASS~~	~~NONE~~	~~SV~~	~~VOLATILES~~ MM
~~GLASS~~	~~ICED~~	~~SS~~	~~SEMIVOLATILES~~ MM
GLASS	ICED	• 01A	• PCB S - G REFMOD

COMMENTS:

SAMPLE LOCATION #6
DEPTH 0-6" BELOW CONCRETE

SAMPLE COLLECTED BY: Mary K. McClain

MEW Site File
Break6_000750

CAFI FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV., 25 FUNSTON RD, KANSAS CITY, KS 66115

FY: 91 AGEND: CSSAR SAMNO: 007 QCC: F MEDIA: SOIL PL: S P F D

ACTIVITY DES: MO, ELECTRIC WORKS REF LATITUDE: __ __ __
LOCATION: CAPE GIRARDEAU MO PROJECT NUM: A33 PT: LONGITUDE: ___ __ __

SAMPLE DES: TRIP BLANK DATE MM TIME FROM REF PT
LOCATION: CAPE GIRARDEAU MO BEG: 06/~~14~~17/91 12:00 EAST: ____
CASE/BATCH/SNO: _____/_/_____ LAB: ___ END: __/__/__ __:__ NORTH: _____
STORET/SAROAD NO: _____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MKP	NAME
~~GLASS~~	~~NONE~~	~~SV~~	~~VOLATILES~~ MM
GLASS	ICED	SS	SEMIVOLATILES

COMMENTS:

SAMPLE LOCATION # 1
DEPTH OF 6-18" BELOW MM ~~SURFA~~ CONCRETE

SAMPLES COLLECTED BY Mary McClain

MEW Site File
Break6_000751

SAFT FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV., 25 FUNSTON RD, KANSAS CITY, KS 66115

Y: 91 ACTNO: 03586R SAMNO: ~~002~~ 008MM DOC: F MEDIA: SOIL PL: S P F D

ACTIVITY DES: MO. ELECTRIC WORKS REF LATITUDE: __ __ __
LOCATION: CAPE GIRARDEAU MO PROJECT NUM: A33 PT: LONGITUDE: ___ __ __

SAMPLE DES: TRIP BLANK DATE and TIME FROM REF PT
LOCATION: CAPE GIRARDEAU MO BEG: 06/~~24~~/27/91 __:__ EAST: ____
ASE/BATCH/SNO: _____/_/_____ LAB: ___ END: __/__/__ __:__ NORTH: ____
TORET/SARDAD NO: _____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MED	NAME
~~PLAS~~	~~NONE~~	~~SV~~	~~VOLATILES~~
Glass	cut ~~None~~ Iced	SS	semi-volatiles

COMMENTS:

Sample location #2

6-18" below concrete

SAMPLE COLLECTED BY: Mary McClain

MEW Site File
Break6_000752

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV., 25 FUNSTON RD., KANSAS CITY, KS 66115

FY: 91 ACTNO: 0556R SAMNO: ~~007~~ 009 MM DOC: X MEDIA: SOIL PL: S P F D

ACTIVITY DES: MO, ELECTRIC WORKS REF LATITUDE: __ __ __
LOCATION: CAPE GIRARDEAU MO PROJECT NUM: A33 PT: LONGITUDE: ___ __ __

SAMPLE DES: TRIP BLANK DATE MM TIME FROM REF PT
LOCATION: CAPE GIRARDEAU MO BEG: 06/17/91 MM 10:00 EAST: ____
CASE/MATCH/SNO: _____/_/_____ LAB: ___ END: __/__/__ __:__ NORTH: ____
STORET/SARDAD NO: _____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
~~GLASS~~	~~NONE~~	~~SV~~	~~VOLATILES~~
GLASS	ICED	SS	SEMIVOLATILES

COMMENTS:

SAMPLE LOCATION #3
6-18" BELOW CONCRETE

SAMPLE COLLECTED BY Mary K. McClain

MEW Site File
Break6_000753

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV., 25 FUNSTON RD, KANSAS CITY, KS 66115

PROJ: SA ACTNO: PSSAR SAMNO: ~~0001~~ 010MM DOC: F MEDIA: SOIL PL: S P F D

ACTIVITY DES: MO, ELECTRIC WORKS REF LATITUDE: __ __ __
LOCATION: CAPE GIRARDEAU MO PROJECT NUM: A33 PT: LONGITUDE: __ __ __

SAMPLE DES: TRIP BLANK DATE TIME FROM REF PT
LOCATION: CAPE GIRARDEAU MO BEG: 06/17MM/91 10:30 EAST: ____
ASF/BATCH/SMO: _____/_/_____ LAB: ___ END: __/__/__ __:__ NORTH: ____
TURF/SAMPAD NO: _____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
~~AMB~~	~~NONE~~	~~VV~~	~~VOLATILES~~ MM
GLASS	ICED	, 55	SEMIVOLATILE

COMMENTS:

SAMPLE LOCATION # 5
DEPTH OF 6-18" BELOW CONCRETE

SAMPLE COLLECTED BY: Mary McClain

SMAPT FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV., 25 FUNSTON RD, KANSAS CITY, KS 66115

FY: 91 ACTNO: PSSAR SAMNO: ~~011~~ 011 MM DOC: ✓ MEDIA: SOIL PI: S P F D

ACTIVITY DES: MO, ELECTRIC WORKS REF LATITUDE: __ __ __
LOCATION: CAPE GIRARDEAU MO PROJECT NUM: A33 PT LONGITUDE: ___ __ __

SAMPLE DES: TRIP BLANK DATE TIME FROM REF PT
LOCATION: CAPE GIRARDEAU MO BEG: 06/~~11~~ MM/91 11 :00 EAST: ____
CASE/BATCH/SMO: _____/_/_____ LAB: ___ END: __/__/__ __:__ NORTH: ____
STORET/SAROAD NO: _____ DOWN: ____

ANALYSIS REQUESTED:

~~CONTAINER~~	~~PRESERVATIVE~~	~~MGP~~	~~NAME~~
~~GLASS~~	~~NONE~~	~~SV~~	~~VOLATILES~~ MM
GLASS	ICED	SS	SEMIVOLATILES

COMMENTS:

SAMPLE LOCATION # 6
DEPTH OF 6-18" BELOW CONCRETE

SAMPLES COLLECTED BY: Mary McClain

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV., 25 FUNSTON RD, KANSAS CITY, KS 66115

FY: 91 ACTNO: 055AR SAMNO: ~~007~~ 012 MM IDOC: M MEDIA: SOIL PL: S P F D

ACTIVITY DES: MO, ELECTRIC WORKS REF LATITUDE: __ __ __
LOCATION: CAPE GIRARDEAU MO PROJECT NUM: 433 RF LONGITUDE: __ __ __

SAMPLE DES: TRIP BLANK DATE TIME FROM REF PT
LOCATION: CAPE GIRARDEAU MO BEG: 06/~~14~~ 17 MM/91 11 : 30 EAST: ____
CASE/BATCH/SMO: _____/_/_____ LAB: ___ END: __/__/__ __:__ NORTH: ____
STORET/SAROAD NO: _____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
~~4 AGS~~	~~NONE~~	~~SV~~	~~VOLATILES~~ MM
GLASS	ICED	.55	SEMIVOLATILES

COMMENTS:

MM

SAMPLE LOCATION ~~#12~~ #07
DEPTH OF 0-6" BELOW CONCRETE

SAMPLE COLLECTED BY: Mary McClain

CHAIN OF CUSTODY RECORD
ENVIRONMENTAL PROTECTION AGENCY REGION VII

6/20/91

ACTIVITY LEADER(Print)	NAME OF SURVEY OR ACTIVITY	DATE OF COLLECTION (DAY / MONTH / YEAR)	SHEET
HAGEN	Missouri Electric Works	17 June 91	1 of 1

CONTENTS OF SHIPMENT

SAMPLE NUMBER	TYPE OF CONTAINERS: CUBITAINER	8-OZ BOTTLE	BOTTLE	BOTTLE	VOA SET (2 VIALS EA)	SAMPLED MEDIA: water	soil	sediment	dust	other	RECEIVING LABORATORY REMARKS OTHER INFORMATION (condition of samples upon receipt, other sample numbers etc.)
	NUMBERS OF CONTAINERS PER SAMPLE NUMBER										
CS56R-001		1					X				
CS56R-002		1					X				
CS56R-003		1					X				
CS56R-004		1					X				
CS56R-005		1					X				
CS56R-006		1					X				
CS56R-007		1					X				
CS56R-008		1					X				
CS56R-009		1					X				
CS56R-010		1					X				
CS56R-011		1					X				
CS56R-012		1					X				

MEW Site File
Break6_000757

DESCRIPTION OF SHIPMENT

___ PIECE(S) CONSISTING OF ___ BOX(ES)

1 ICE CHEST(S); OTHER ___

MODE OF SHIPMENT

___ COMMERCIAL CARRIER: ___

___ COURIER

X SAMPLER CONVEYED

___ (SHIPPING DOCUMENT NUMBER)

PERSONNEL CUSTODY RECORD

RELINQUISHED BY (SAMPLER)	DATE	TIME	RECEIVED BY	REASON FOR CHANGE OF CUSTODY
Mary McClain X SEALED UNSEALED	6/20	2:30	Nicole Roby 6/21/91 SEALED 2:30 UNSEALED	Courier
RELINQUISHED BY SEALED UNSEALED	DATE	TIME	RECEIVED BY SEALED UNSEALED	REASON FOR CHANGE OF CUSTODY
RELINQUISHED BY SEALED UNSEALED	DATE	TIME	RECEIVED BY SEALED UNSEALED	REASON FOR CHANGE OF CUSTODY

7-EPA-9262(Revised 5/85)

ENVIRONMENTAL SERVICES ASSISTANCE TEAM – ZONE II

ICF Technology Incorporated

ManTech Environmental Technology, Inc.

The Bionetics Corp.

ESAT Region VII
ManTech Env. Tech., Inc.
25 Funston Road
Kansas City, KS 66115
(913) 551-5000

TO: Larry Marchin/Barry Evans
Data Review Task Monitor

THRU: Harold Brown, Ph.D.
ESAT Deputy Project Officer, EPA

FROM: Shirley L. Williams SLW
ESAT Data Reviewer

THRU: Ronald Ross
ESAT Manager

DATE: August 16, 1991
SUBJECT: Review of organic data for MO Electric Works.

TID# 07-9103-535
ASSIGNMENT# 903
ICF ACCT# 302-26-535-02
ManTech S.O.# 1073-535
ESAT Document No. ESAT-VII-535-0164

These data were reviewed primarily according to the "Laboratory Data Validation Functional Guidelines for Evaluating Organic Analyses," February 1988 revision with changes given in the Region VII Organic Data Review Training Manual, the "National Functional Guidelines for Organic Data Review", June 1991 draft, and EPA memorandums.

The following comments and attached data sheets are a result of the ESAT review, according to EPA policies, of the following data from the contract laboratory.

CASE NO.: 16697
SITE: MO Electric Works
REVIEWER: Shirley L. Williams

LABORATORY: PNELI
METHOD NO.: CS0390A
EPA ACTIVITY NO.: CS56R
MATRIX: Soil

BNAs		Pesticides/PCBs	
SMO Sample No.	EPA Sample No.	SMO Sample No.	EPA Sample No.
GL267	CS56R007	GL257	CS56R001
GL268	CS56R008	GL258	CS56R002
GL269	CS56R009	GL259	CS56R003
GL270	CS56R010	GL260	CS56R004
GL271	CS56R011	GL261	CS56R005
GL272	CS56R012	GL262	CS56R006

GENERAL

This data review assignment covers six soil samples analyzed for BNAs and six soil samples analyzed for Pesticides/PCBs for case number 16697. No field blanks, no field duplicates, no PE samples, and twenty QC samples were included in this assignment. Since both low and medium level samples were included in the BNA portion, QC were performed for both levels.

1. **Holding Times and Preservation**

The holding time and preservation requirements for soils have not been established.

2. **GC/MS Tuning**

GC/MS tuning criteria were met for all samples.

3. **GC/ECD Instrument Performance**

A. The resolution check mixture was within control limits.

B. The performance evaluation check mixture was within control limits for frequency and sequencing of analyses, peak resolution, retention time windows, % RPD of surrogate recoveries and individual mixes, and for % breakdown of endrin and 4,4'-DDT.

4. **Initial Calibration**

A. Mean RRF values were inside control limits for all analytes.

B. Percent RSD was out for alpha-BHC and 4,4'-DDD on the 1701 column on the 7/11-7/12 calibration. No data were qualified.

C. The initial calibration was within control limits for retention time windows and at least three peaks were used for quantitation.

5. **Continuing Calibration**

A. RRF50 values were inside control limits for all analytes.

B. Percent D for 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, and hexachlorocyclopentadiene were outside control limits for the BNA calibration. Since all associated data were non-detect, no data were qualified.

C. Calibration checks were performed with the proper frequency and sequencing, and recoveries were within control limits for retention time windows, and % RPD for all compounds except 4,4'-DDD on the confirmation column. No data were qualified, as all samples were non-detect for that analyte.

6. Surrogate Spikes

A. BNA-Surrogate recoveries were within control limits for all samples analyzed.

B. Pest/PCB-Retention times and % recoveries were within control limits for both surrogates for all samples except CS56R006. No data were qualified as all analytes were non-detect for that sample.

7. Matrix Spike / Matrix Spike Duplicate

BNA	2 out of 11 RPD out of limits 4-chloro-3-methylphenol acenapthene
(low level)	1 out of 22 spike % recoveries outside limits 2,4-dinitrotoluene
BNA	1 out of 11 RPD out of control limits
(med level)	2 out of 22 spike % recoveries outside limits 1,2,4-trichlorobenzene was out for both
Pest/PCB	0 out of 6 RPD out of limits 0 out of 12 spike % recoveries outside limits

No data were qualified.

8. Method Blanks / Field Blanks

A. BNA-No analytes of interest were found in either blank.

B. Pesticides/PCB-Dieldrin was found in CS56R902M. No data were qualified, as all samples were non-detect. The CRQL was greater than the value reported in that blank, so the CRQL was reported instead.

9. Internal Standard Response

Phenanthrene-d10, Chrysene-d12, and Perylene-d12 were all out for area counts for CS56R012 and its reanalysis for the BNA fractions. All values reported for that sample were from the initial analysis. No data were qualified as all related analytes were non-detect for that sample.

10. LCS

An LCS was not performed for this assignment since it is only required with low concentration water sample analyses.

11. Pesticide Cleanup Checks

A. Florisil-All sample recoveries were within control limits.

B. Gel Permeation Cleanup-Dieldrin and Endrin were outside of control limits. The recoveries for these two compounds were not considered high (greater than 120%) no data were qualified.

12. Performance Evaluation Sample

No PE sample was included in this package.

13. Quantitation

In a level two review, calculations from raw data are not performed. Several samples had values reported for Arochlor 1016 and/or Arochlor 1260 that were below the CRQL, so the higher default value was reported instead.

Values reported for the compounds in the pesticides section were taken from the quantitation or the confirmation column, whichever was lower. There was not always close agreement between the two values.

14. Summary

No data were qualified for this package. This data package is acceptable in terms of requirements for accuracy, precision and completeness as described in the "Laboratory Data Validation Functional Guidelines for Evaluating Organic Analyses."

ANALYSIS REQUEST REPORT

VALIDATED DATA

FOR ACTIVITY: CS56R

S P F D

09/06/91 12:33:26

ALL REAL SAMPLES AND FIELD Q.C.

* FINAL REPORT

FY: 91 ACTIVITY: CS56R DESCRIPTION: MO. ELECTRIC WORKS LOCATION: CAPE GIRARDEAU MISSOURI

STATUS: ACTIVE TYPE: SAMPLING - CONTRACT LAB ANALYSIS PROJECT: A33

LABO DUE DATE IS 8/19/91. REPORT DUE DATE IS 8/31/91.

INSPECTION DATE: 6/17/91 ALL SAMPLES RECEIVED DATE: 06/20/91

ALL DATA APPROVED BY LABO DATE: 09/06/91 FINAL REPORT TRANSMITTED DATE: 09/06/91

EXPECTED LABO TURNAROUND TIME IS 60 DAYS EXPECTED REPORT TURNAROUND TIME IS 75 DAYS

ACTUAL LABO TURNAROUND TIME IS 78 DAYS ACTUAL REPORT TURNAROUND TIME IS 81 DAYS

SAMP. NO.	QCC	M	DESCRIPTION	SAMPLE STATUS	# CONT.	CITY	STATE	AIRS/ STORET LOC NO	BEG. DATE	BEG. TIME	END. DATE	END. TIME
001		S	MO.ELECTRIC WORKS-SAMPLE LOCATION #1	1	1	CAPE GIRARDEAU	MISSOURI		06/17/91	07:30	/ /	:
002		S	MO.ELECTRIC WORKS-SAMPLE LOCATION #2	1	1	CAPE GIRARDEAU	MISSOURI		06/17/91	08:00	/ /	:
003		S	MO.ELECTRIC WORKS-SAMPLE LOCATION #3	1	1	CAPE GIRARDEAU	MISSOURI		06/17/91	08:45	/ /	:
004		S	MO.ELECTRIC WORKS-SAMPLE LOCATION #4	1	1	CAPE GIRARDEAU	MISSOURI		06/17/91	09:00	/ /	:
005		S	MO.ELECTRIC WORKS-SAMPLE LOCATION #5	1	1	CAPE GIRARDEAU	MISSOURI		06/17/91	09:30	/ /	:
006		S	MO.ELECTRIC WORKS-SAMPLE LOCATION #6	1	1	CAPE GIRARDEAU	MISSOURI		06/17/91	08:30	/ /	:
007		S	MO.ELECTRIC WORKS-SAMPLE LOCATION #1	1	1	CAPE GIRARDEAU	MISSOURI		06/17/91	12:00	/ /	:
008		S	MO.ELECTRIC WORKS-SAMPLE LOCATION #2	1	1	CAPE GIRARDEAU	MISSOURI		06/17/91	:	/ /	:
009		S	MO.ELECTRIC WORKS-SAMPLE LOCATION #3	1	1	CAPE GIRARDEAU	MISSOURI		06/17/91	10:00	/ /	:
010		S	MO.ELECTRIC WORKS-SAMPLE LOCATION #5	1	1	CAPE GIRARDEAU	MISSOURI		06/17/91	10:30	/ /	:
011		S	MO.ELECTRIC WORKS-SAMPLE LOCATION #6	1	1	CAPE GIRARDEAU	MISSOURI		06/17/91	11:00	/ /	:
012		S	MO.ELECTRIC WORKS-SAMPLE LOCATION #7	1	1	CAPE GIRARDEAU	MISSOURI		06/17/91	11:30	/ /	:

TABLE OF CODES

SAMP. NO. = SAMPLE IDENTIFICATION NUMBER
QCC = QUALITY CONTROL SAMPLE/AUDIT CODE
M = MEDIA OF SAMPLE (A=AIR, T=TISSUE, H=HAZARDOUS MATERIAL, S=SEDIMENT/SOIL, W=WATER)
AIRS/STORET LOC. NO. = A SAMPLING SITE LOCATION IDENTIFICATION NUMBER
BEG. DATE = THE DATE SAMPLING WAS STARTED
BEG. TIME = THE TIME SAMPLING WAS STARTED
END. DATE = THE DATE SAMPLING WAS ENDED
END. TIME = THE TIME SAMPLING WAS STOPPED
A = RESERVED
B = RESERVED
PES = PESTICIDES BY CONTRACT
= DIOXINS/FURANS BY EPA
E = EXPLOSIVES BY CONTRACT
FLD = FIELD MEASUREMENTS BY EPA
G = MINERALS & DISSOLVED MATERIALS BY EPA
HER = HERBICIDES BY EPA
I = ION CHROMATOGRAPHY ANALYSES BY EPA
MC = METALS BY CONTRACT
BNC = BASE NEUTRALS BY CONTRACT
L = FISH PHYSICAL DATA BY EPA
MET = METALS BY EPA
N = FISH TISSUE PARAMETERS BY EPA
VC = VOLATILES BY CONTRACT
P = PESTICIDES BY EPA
Q = FLASH POINT ANALYSES BY EPA
R = RESERVED
BN = SEMIVOLATILE BY EPA
T = CYANIDE PHENOL BY EPA
U = RESERVED
VOA = VOLATILE ORGANICS BY EPA
HC = HERBICIDES BY CONTRACT
X = RESERVED
Y = RESERVED
TRK = ACTIVITY TRACKING PARAMETERS BY EPA

STORET DETECTION IDENTIFIERS
BLANK = NO REMARKS
J = DATA REPORTED BUT NOT VALID BY APPROVED QC PROCEDURES
I = INVALID SAMPLE/DATA - VALUE NOT REPORTED
U = LESS THAN (MEASUREMENT DETECTION LIMIT)
M = DETECTED BUT BELOW THE LEVEL FOR ACCURATE QUANTIFICATION
O = PARAMETER NOT ANALYZED

CONTRACTOR/ IN HOUSE / FIELD MEDIA GROUPS
FIELD = * * * = AF,HF,SF,TF,WF,ZZ
CONTRACTOR = * = HA,HC,HJ,HK,HO,SC,SJ,SK,SO,SW,TC,TJ, TK,TO,TW,WA,WC,WE,WJ,WK,WO,WW
IN HOUSE = * = ALL OTHERS

QUALITY CONTROL AUDIT CODES
A = TRUE VALUE FOR CALIBRATION STANDARD
B = CONCENTRATION RESULTING FROM DUPLICATE LAB SPIKE
C = MEASURED VALUE FOR CALIBRATION STANDARD
D = MEASURED VALUE FOR FIELD DUPLICATE
F = MEASURED VALUE FOR FIELD BLANK
G = MEASURED VALUE FOR METHOD STANDARD
H = TRUE VALUE FOR METHOD STANDARD
K = CONCENTRATION RESULTING FROM DUPLICATE FIELD SPIKE
L = MEASURED VALUE FOR LAB DUPLICATE
M = MEASURED VALUE FOR LAB BLANK
N = MEASURED VALUE FOR DUPLICATE FIELD SPIKE
P = MEASURED VALUE FOR PERFORMANCE STANDARD
R = CONCENTRATION RESULTING FROM LAB SPIKE
S = MEASURED VALUE FOR LAB SPIKE
T = TRUE VALUE OF PERFORMANCE STANDARD
W = MEASURED VALUE FOR DUPLICATE LAB SPIKE
Y = MEASURED VALUE FOR FIELD SPIKE
Z = CONCENTRATION RESULTING FROM FIELD SPIKE

MEDIA CODES
A = AIR
T = BIOLOGICAL (PLANT & ANIMAL) TISSUE
H = HAZARDOUS MATERIALS/MAN MADE PRODUCTS
S = SEDIMENT, SLUDGE & SOIL
W = WATER

UNITS
NA = NOT APPLICABLE
PG = PICOGRAMS (1 X 10-12 GRAMS)
NG = NANOGRAMS (1 X 10-9 GRAMS)
UG = MICROGRAMS (1 X 10-6 GRAMS)
MG = MILLIGRAMS (1 X 10-3 GRAMS)
M3 = METER CUBED
MPH = MILES PER HOUR
SCM = STANDARD (1 ATM, 25 C) CUBIC METER
KG = KILOGRAM
L = LITER
C = CENTIGRADE DEGREES
SU = STANDARD (PH) UNITS
# = NUMBER
LB = POUNDS
IN = INCHES
M/F = MALE/FEMALE
M2 = SQUARE METER
I.D. = SPECIES IDENTIFICATION
GPM = GALLONS PER MINUTE
CFS = CUBIC FEET PER SECOND
MGD = MILLION GALLONS PER DAY
1000G= FLOW, 1000 GALLONS PER COMPOSITE
UMHOS= CONDUCTIVITY UNITS (1/OHMS)
NTU = TURBIDITY UNITS
PC/L = PICO (1 X 10-12) CURRIES PER LITER
MV = MILLIVOLT
SQ FT= SQUARE FEET
P/CM2= PICOGRAMS PER SQ. CENTIMETER
U/CM2= MICROGRAMS PER SQ. CENTIMETER

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-CS56R VALIDATED DATA

COMPOUND	UNITS	001		002		003		004		005	
SP17 PCB-1016	UG/KG	41	U	69		40	U	40	U	78	
SP18 PCB-1221	UG/KG	41	U	40	U	40	U	40	U	41	U
SP19 PCB-1232	UG/KG	84	U	81	U	82	U	82	U	84	U
SP20 PCB-1242	UG/KG	41	U	40	U	40	U	40	U	41	U
SP21 PCB-1248	UG/KG	41	U	40	U	40	U	40	U	41	U
SP22 PCB-1254	UG/KG	41	U	40	U	40	U	40	U	41	U
SP23 PCB-1260	UG/KG	110		860		410		190		740	
ZZ01 SAMPLE NUMBER	NA	001		002		003		004		005	
ZZ02 ACTIVITY CODE	NA	CS56R		CS56R		CS56R		CS56R		CS56R	

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-CS56R VALIDATED DATA

COMPOUND	UNITS	006		007		008		009		010	
SP17 PCB-1016	UG/KG	4000	U								
SP18 PCB-1221	UG/KG	4000	U								
SP19 PCB-1232	UG/KG	8100	U								
SP20 PCB-1242	UG/KG	4000	U								
SP21 PCB-1248	UG/KG	4000	U								
SP22 PCB-1254	UG/KG	4000	U								
SP23 PCB-1260	UG/KG	560000									
SS01 PHENOL	UG/KG			420	U	410	U	400	U	420	U
SS02 CARBAZOLE	UG/KG			NA	O	NA	O	NA	O	NA	O
SS03 ETHER, BIS(2-CHLOROETHYL), BY GC/MS	UG/KG			420	U	410	U	400	U	420	U
SS04 2-CHLOROPHENOL	UG/KG			420	U	410	U	400	U	420	U
SS05 1,3-DICHLOROBENZENE	UG/KG			420	U	410	U	400	U	420	U
SS06 1,4-DICHLOROBENZENE	UG/KG			420	U	410	U	400	U	420	U
SS07 BENZYL ALCOHOL	UG/KG			420	U	410	U	400	U	420	U
SS08 1,2-DICHLOROBENZENE	UG/KG			420	U	410	U	400	U	420	U
SS09 2-METHYLPHENOL (O-CRESOL)	UG/KG			420	U	410	U	400	U	420	U
SS10 WTHER, BIS(2-CHLOROISOPROPYL), BY GC/MS	UG/KG			420	U	410	U	400	U	420	U
SS11 4-METHYLPHENOL (P-CRESOL)	UG/KG			420	U	410	U	400	U	420	U
SS12 N-NITROSO-DIPROPYLAMINE	UG/KG			420	U	410	U	400	U	420	U
SS13 HEXACHLOROETHANE	UG/KG			420	U	410	U	400	U	420	U
SS14 NITROBENZENE	UG/KG			420	U	410	U	400	U	420	U
SS15 ISOPHORONE	UG/KG			420	U	410	U	400	U	420	U
SS16 2-NITROPHENOL	UG/KG			420	U	410	U	400	U	420	U
SS17 2,4-DIMETHYLPHENOL	UG/KG			420	U	410	U	400	U	420	U
SS18 BENZOIC ACID, BY GC/MS	UG/KG			1000	U	1000	U	1000	U	1000	U
SS19 METHANE, BIS(2-CHLOROETHYOXY), BY GC/MS	UG/KG			420	U	410	U	400	U	420	U

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-CS56R VALIDATED DATA

COMPOUND	UNITS	006	007		008		009		010	
SS20 2,4-DICHLOROPHENOL	UG/KG		420	U	410	U	400	U	420	U
SS21 1,2,4-TRICHLOROBENZENE	UG/KG		420	U	410	U	400	U	420	U
SS22 NAPHTHALENE	UG/KG		420	U	410	U	400	U	420	U
SS23 4-CHLOROANILINE	UG/KG		420	U	410	U	400	U	420	U
SS24 HEXACHLOROBUTADIENE,BY GC/MS	UG/KG		420	U	410	U	400	U	420	U
SS25 4-CHLORO-3-METHYLPHENOL	UG/KG		420	U	410	U	400	U	420	U
SS26 2-METHYLNAPHTHALENE	UG/KG		420	U	410	U	400	U	420	U
SS27 HEXACHLOROCYCLOPENTADIENE,BY GC/MS	UG/KG		420	U	410	U	400	U	420	U
SS28 2,4,6-TRICHLOROPHENOL	UG/KG		420	U	410	U	400	U	420	U
SS29 2,4,5-TRICHLOROPHENOL	UG/KG		1000	U	1000	U	1000	U	1000	U
SS30 2-CHLORONAPHTHALENE	UG/KG		420	U	410	U	400	U	420	U
SS31 2-NITROANILINE	UG/KG		1000	U	1000	U	1000	U	1000	U
SS32 PHTHALATE, DIMETHYL, BY GC/MS	UG/KG		420	U	410	U	400	U	420	U
SS33 ACENAPHTHYLENE, BY GC/MS	UG/KG		420	U	410	U	400	U	420	U
SS34 3-NITROANILINE	UG/KG		1000	U	1000	U	1000	U	1000	U
SS35 ACENAPHTHENE, BY GC/MS	UG/KG		420	U	410	U	400	U	420	U
SS36 2,4-DINITROPHENOL	UG/KG		1000	U	1000	U	1000	U	1000	U
SS37 4-NITROPHENOL	UG/KG		1000	U	1000	U	1000	U	1000	U
SS38 DIBENZOFURAN	UG/KG		420	U	410	U	400	U	420	U
SS39 2,4-DINITROTOLUENE	UG/KG		420	U	410	U	400	U	420	U
SS40 2,6-DINITROTOLUENE	UG/KG		420	U	410	U	400	U	420	U
SS41 PHTHALATE, DIETHYL, BY GC/MS	UG/KG		420	U	410	U	400	U	420	U
SS42 4-CHLOROPHENYL PHENYL ETHER	UG/KG		420	U	410	U	400	U	420	U
SS43 FLUORENE,GC/MS	UG/KG		420	U	410	U	400	U	420	U
SS44 4-NITROANILINE	UG/KG		1000	U	1000	U	1000	U	1000	U
SS45 4,6-DINITRO-2-METHYLPHENOL	UG/KG		1000	U	1000	U	1000	U	1000	U

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-CS56R VALIDATED DATA

COMPOUND	UNITS	006	007		008		009		010	
SS46 N-NITROSODIPHENYLAMINE	UG/KG		420	U	410	U	400	U	420	U
SS47 4-BROMOPHENYL PHENYL ETHER	UG/KG		420	U	410	U	400	U	420	U
SS48 HEXACHLOROBENZENE,BY GC/MS	UG/KG		420	U	410	U	400	U	420	U
SS49 PENTACHLOROPHENOL	UG/KG		1000	U	1000	U	1000	U	1000	U
SS50 PHENANTHRENE	UG/KG		420	U	410	U	400	U	420	U
SS51 ANTHRACENE, BY GC/MS	UG/KG		420	U	410	U	400	U	420	U
SS52 PHTHALATE, DI-N-BUTYL-, BY GC/MS	UG/KG		420	U	410	U	400	U	420	U
SS53 FLUORANTHENE,BY GC/MS	UG/KG		420	U	410	U	400	U	420	U
SS54 PYRENE	UG/KG		420	U	410	U	400	U	420	U
SS55 PHTHALATE, BUTYL BENZYL	UG/KG		420	U	410	U	400	U	420	U
SS56 3,3'-DICHLOROBENZIDINE	UG/KG		420	U	410	U	400	U	420	U
SS57 ANTRACENE, BENZO(A), BY GC/MS	UG/KG		420	U	410	U	400	U	420	U
SS58 PHTHALATE, BIS(2-ETHYLHEXYL), BY GC/MS	UG/KG		420	U	1000		410		420	U
SS59 CHRYSENE, BY GC/MS	UG/KG		420	U	410	U	400	U	420	U
SS60 PHTHALATE, DI-N-OCTYL-, BY GC/MS	UG/KG		420	U	410	U	400	U	420	U
SS61 FLUORANTHENE, BENZO(B), BY GC/MS	UG/KG		420	U	410	U	400	U	420	U
SS62 FLUORANTHENE, BENZO(K), BY GC/MS	UG/KG		420	U	410	U	400	U	420	U
SS63 PYRENE, BENZO(A), BY GC/MS	UG/KG		420	U	410	U	400	U	420	U
SS64 INDENO(1,2,3-CD)PYRENE	UG/KG		420	U	410	U	400	U	420	U
SS65 ANTHRACENE, DIBENZO(A,H), BY GC/MS	UG/KG		420	U	410	U	400	U	420	U
SS66 PERYLENE, BENZO(G,H,I), BY GC/MS	UG/KG		420	U	410	U	400	U	420	U
ZZ01 SAMPLE NUMBER	NA	006	007		008		009		010	
ZZ02 ACTIVITY CODE	NA	CS56R	CS56R		CS56R		CS56R		CS56R	

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-CS56R VALIDATED DATA

COMPOUND	UNITS	011		012				
SS01 PHENOL	UG/KG	12000	U	420	U			
SS02 CARBAZOLE	UG/KG	NA	O	NA	O			
SS03 ETHER, BIS(2-CHLOROETHYL), BY GC/MS	UG/KG	12000	U	420	U			
SS04 2-CHLOROPHENOL	UG/KG	12000	U	420	U			
SS05 1,3-DICHLOROBENZENE	UG/KG	12000	U	420	U			
SS06 1,4-DICHLOROBENZENE	UG/KG	12000	U	420	U			
SS07 BENZYL ALCOHOL	UG/KG	12000	U	420	U			
SS08 1,2-DICHLOROBENZENE	UG/KG	12000	U	420	U			
SS09 2-METHYLPHENOL (O-CRESOL)	UG/KG	12000	U	420	U			
SS10 WTHER, BIS(2-CHLOROISOPROPYL), BY GC/MS	UG/KG	12000	U	420	U			
SS11 4-METHYLPHENOL (P-CRESOL)	UG/KG	12000	U	420	U			
SS12 N-NITROSO-DIPROPYLAMINE	UG/KG	12000	U	420	U			
SS13 HEXACHLOROETHANE	UG/KG	12000	U	420	U			
SS14 NITROBENZENE	UG/KG	12000	U	420	U			
SS15 ISOPHORONE	UG/KG	12000	U	420	U			
SS16 2-NITROPHENOL	UG/KG	12000	U	420	U			
SS17 2,4-DIMETHYLPHENOL	UG/KG	12000	U	420	U			
SS18 BENZOIC ACID, BY GC/MS	UG/KG	29000	U	1000	U			
SS19 METHANE, BIS(2-CHLOROETHYOXY), BY GC/MS	UG/KG	12000	U	420	U			
SS20 2,4-DICHLOROPHENOL	UG/KG	12000	U	420	U			
SS21 1,2,4-TRICHLOROBENZENE	UG/KG	160000		1400				
SS22 NAPHTHALENE	UG/KG	12000	U	420	U			
SS23 4-CHLOROANILINE	UG/KG	12000	U	420	U			
SS24 HEXACHLOROBUTADIENE,BY GC/MS	UG/KG	12000	U	420	U			
SS25 4-CHLORO-3-METHYLPHENOL	UG/KG	12000	U	420	U			
SS26 2-METHYLNAPHTHALENE	UG/KG	12000	U	420	U			

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-CS56R VALIDATED DATA

COMPOUND	UNITS	011		012				
SS27 HEXACHLOROCYCLOPENTADIENE,BY GC/MS	UG/KG	12000	U	420	U			
SS28 2,4,6-TRICHLOROPHENOL	UG/KG	12000	U	420	U			
SS29 2,4,5-TRICHLOROPHENOL	UG/KG	29000	U	1000	U			
SS30 2-CHLORONAPHTHALENE	UG/KG	12000	U	420	U			
SS31 2-NITROANILINE	UG/KG	29000	U	1000	U			
SS32 PHTHALATE, DIMETHYL, BY GC/MS	UG/KG	12000	U	420	U			
SS33 ACENAPHTHYLENE, BY GC/MS	UG/KG	12000	U	420	U			
SS34 3-NITROANILINE	UG/KG	29000	U	1000	U			
SS35 ACENAPHTHENE, BY GC/MS	UG/KG	12000	U	420	U			
SS36 2,4-DINITROPHENOL	UG/KG	29000	U	1000	U			
SS37 4-NITROPHENOL	UG/KG	29000	U	1000	U			
SS38 DIBENZOFURAN	UG/KG	12000	U	420	U			
SS39 2,4-DINITROTOLUENE	UG/KG	12000	U	420	U			
SS40 2,6-DINITROTOLUENE	UG/KG	12000	U	420	U			
SS41 PHTHALATE, DIETHYL, BY GC/MS	UG/KG	12000	U	420	U			
SS42 4-CHLOROPHENYL PHENYL ETHER	UG/KG	12000	U	420	U			
SS43 FLUORENE,GC/MS	UG/KG	12000	U	420	U			
SS44 4-NITROANILINE	UG/KG	29000	U	1000	U			
SS45 4,6-DINITRO-2-METHYLPHENOL	UG/KG	29000	U	1000	U			
SS46 N-NITROSODIPHENYLAMINE	UG/KG	12000	U	420	U			
SS47 4-BROMOPHENYL PHENYL ETHER	UG/KG	12000	U	420	U			
SS48 HEXACHLOROBENZENE,BY GC/MS	UG/KG	12000	U	420	U			
SS49 PENTACHLOROPHENOL	UG/KG	29000	U	1000	U			
SS50 PHENANTHRENE	UG/KG	12000	U	420	U			
SS51 ANTHRACENE, BY GC/MS	UG/KG	12000	U	420	U			
SS52 PHTHALATE, DI-N-BUTYL-, BY GC/MS	UG/KG	12000	U	420	U			

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-CS56R VALIDATED DATA

COMPOUND	UNITS	011		012				
SS53 FLUORANTHENE,BY GC/MS	UG/KG	12000	U	420	U			
SS54 PYRENE	UG/KG	12000	U	420	U			
SS55 PHTHALATE, BUTYL BENZYL	UG/KG	12000	U	420	U			
SS56 3,3'-DICHLOROBENZIDINE	UG/KG	12000	U	420	U			
SS57 ANTRACENE, BENZO(A), BY GC/MS	UG/KG	12000	U	420	U			
SS58 PHTHALATE, BIS(2-ETHYLHEXYL), BY GC/MS	UG/KG	12000	U	420	U			
SS59 CHRYSENE, BY GC/MS	UG/KG	12000	U	420	U			
SS60 PHTHALATE, DI-N-OCTYL-, BY GC/MS	UG/KG	12000	U	420	U			
SS61 FLUORANTHENE, BENZO(B), BY GC/MS	UG/KG	12000	U	420	U			
SS62 FLUORANTHENE, BENZO(K), BY GC/MS	UG/KG	12000	U	420	U			
SS63 PYRENE, BENZO(A), BY GC/MS	UG/KG	12000	U	420	U			
SS64 INDENO(1,2,3-CD)PYRENE	UG/KG	12000	U	420	U			
SS65 ANTHRACENE, DIBENZO(A,H), BY GC/MS	UG/KG	12000	U	420	U			
SS66 PERYLENE, BENZO(G,H,I), BY GC/MS	UG/KG	12000	U	420	U			
ZZ01 SAMPLE NUMBER	NA	011		012				
ZZ02 ACTIVITY CODE	NA	CS56R		CS56R				

ACTIVITY CS56R MO. ELECTRIC WORKS

THE PROJECT LEADER SHOULD CIRCLE ONE - STORET, AIRS, OR ARCHIVE.

CIRCLE ONE: STORET AIRS ARCHIVE

DATA APPROVED BY LABO FOR TRANSMISSION TO PROJECT LEADER ON 09/06/91 12:07:12 BY _____.